

REMARKS

The foregoing amendments and remarks which follow are responsive to the Office Action dated May 16, 2007. In the Office Action, the Examiner importantly indicated that Claims 3, 4, and 9 would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. The Examiner also requested that the Abstract of the Disclosure be amended into the proper language and format. Furthermore, Claims 11-14, and 16 were objected to because the claims contained the word “though” instead of “through.” In addition, the Examiner rejected Claims 1, 2, 5-7, 11-14, 16, 18, and 19 under 35 U.S.C. § 103(a) as being unpatentable over Higbee (EP 0987616 A2) (referred to herein as the “Higbee reference”) in view of U.S. Patent No. 6,218,659 to Bidiville et al., (referred to herein as the “Bidiville reference”). Claim 8 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Higbee reference in view of the Bidiville reference and further in view of U.S. Patent No. 6,791,534 to Tada et al. (referred to herein as the “Tada reference”). Claim 10 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Higbee reference in view of the Bidiville reference and further in view of U.S. Patent No. 5,486,845 to Chait (referred to herein as the “Chait reference”). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Higbee reference, in view of the Bidiville reference and further in view of U.S. Patent No. 5,751,275 to Bullister (referred to herein as the “Bullister reference”). Claim 17 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the Higbee reference in view of the Bidiville reference and further in view of U.S. Patent No. 5,541,621 to Nmngani (referred to herein as the “Nmngani reference”).

Amendment to the Specification

In the Office Action, the Examiner requested that the Abstract be amended into proper language and format. By this response, Applicant has amended the Abstract according the Examiner’s request. In particular, the abstract has been reduced to less than 150 words, and the terms objected to by the Examiner have been amended.

Claim Objections

The Examiner objected to Claims 11-14 and 16 because they included the word “though” instead of “through.” Therefore, Applicant has amended the claims to include the word “through” instead of “though.”

Claim Rejections – 35 USC § 103(a)

The Examiner rejected Claims 1, 2, 5-8, and 10-19 under 35 U.S.C. § 103(a). Applicant respectfully submits that a *prima facie* case of obviousness has not been established based on the cited references. As is discussed in detail below, all of the pending claims are believed to be allowable. Reconsideration and withdrawal of the 103 rejection is respectfully requested.

No Teaching or Suggestion of All the Claim Limitations

The Examiner has identified that the present invention is distinguishable over the disclosure of the Higbee reference because the present invention includes an optically permeable region in the separating wall, and the electronic components include, optical detection means directed towards the optically permeable region and the ball. The detection means are operable to detect motion of the ball and to generate electronic signals representative of the motion of the ball. These features are not disclosed in the Higbee reference.

The provision of optical detection means in a first chamber, separated from the electronic component in the second chamber by a wall having an optically permeable region prevents any liquid which may enter the first chamber from entering the second chamber, therefore protecting the electronic components.

The applicant submits that it would not be obvious to a person skilled in the art to modify the apparatus of the Higbee reference to result in an electronic pointing device or cursor control as defined in claim 1, for the following reasons.

The Higbee reference uses two housings (7, 9), wherein the ball is in one housing (7), and the electronics are in the second housing (9). To convey rotation of the ball from one

housing to the other, mechanical shafts are provided in the two housings, the shafts being coupled from one housing to the other using magnets.

There is nothing in the Higbee reference to motivate a person skilled in the art to replace the mechanical shafts and magnets described therein with the optical components of the present invention, as the skilled person would consider that the embodiment of the Higbee reference solved the problem of isolating certain components from the external environment. Furthermore, at least two fundamental design changes would have to be made to the apparatus of the Higbee reference to achieve the claimed invention. First, the mechanical shafts and motion detectors would need to be replaced with an optical detector, and secondly, an optically permeable region would have to be incorporated in the separating wall.

In light of the lack of motivation to modify the device of the Higbee reference in line with the claimed invention, and that significant design changes which would be necessary to undertake such a modification, it is submitted that the present invention is not obvious over the disclosure of the Higbee reference. The rejection of claim 1 on the grounds of the Higbee reference is therefore respectfully traversed.

It is further submitted that dependent claims are patentable at least by virtue of their dependencies. Therefore the rejection claims dependent upon Claim 1 is also respectfully traversed.

Conclusion

For the foregoing reasons, Applicant respectfully submits that all the stated grounds of rejection have been overcome and that Claims 1-19 are in condition for allowance. An early notice of allowance is therefore respectfully requested.

Should the Examiner have any suggestions or comments for expediting allowance of the above-identified application, the Examiner is invited to contact the Applicant's representative at the telephone number listed below.

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If any additional fee is required, please charge Deposit Account Number 19-4330.

Respectfully submitted,

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